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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,871	02/09/2006	Iden Mossanen-Shams	1589215	2365
22913	7590	10/03/2007		
WORKMAN NYDEGGER 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111			EXAMINER SAIDI, AZADEH	
			ART UNIT 3735	PAPER NUMBER
			MAIL DATE 10/03/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,871	Applicant(s) MOSSANEN-SHAMS, IDEN	
	Examiner Anita Saidi	Art Unit 3735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>09/18/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 12 is objected to because of the following informalities: The limitation "Chambers' " appears to be a typing error and should be amended to - -Chamber's- -
Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 10-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 recites the limitation "a feedback" at line 5. The metes and bounds of this limitation are unclear. For example, the structure forming this limitation of the apparatus claim is not defined within the claim. If the limitation does not have a structure, the limitation is non-statutory.

Claim 10 recites the limitation "at least one inner wall" in line 11. There is insufficient antecedent basis for this limitation in the claim. There is only one inner wall recited as the antecedent for this limitation.

Claim 14 recites the limitation "at least one inner wall" in line 2. There is insufficient antecedent basis for this limitation in the claims. There is only one inner wall

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recited as the antecedent for this limitation. Furthermore, if there are a plurality of inner and outer walls, it is unclear which ones are referred to at lines 3-5 of the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,245,651 to Frost (Hereinafter "Frost") in view of US 6,047,203 to Sackner et al (Hereinafter "Sackner").

In reference to claims 10-11 and 13:

Frost teaches:

A device for measuring body movement, comprising an electro-mechanical transducer. The device is particularly designed to give warning of cessation of breathing movements (Abstract of Frost). The item is worn over the user's body (Fig. 3 of Frost), a sensor (12 of Frost) senses the breathing movements, and the garment has a chamber (pocket 220 of Frost) which spans the entire lung region, the pocket comprises an inner wall (the side of the

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pocket 220 that contacts the users skin of Frost), and an outer wall (the outside of the pocket 220 of Frost). The inner wall follows the displacement and said sensor senses the pressure within said at least one chamber. The pocket is not sealed and therefore it contains air.

However, Frost fails to teach that:

The device further comprises a feedback, driven by said sensor, for determining successive values representative of the user's lung fluctuations and for translating those values into appropriate lung-evaluating information, and incorporating an array of chambers locating a chamber over a separate region of the user's lung.

Sackner teaches that:

A non-invasive physiologic signs monitoring device includes a garment with electrocardiogram electrodes and various inductive plethysmographic sensors sewn, embroidered, embedded, or otherwise attached to the garment with an adhesive. The garment is in the form of a shirt. When the garment is fitted over the torso of the patient to be monitored, the electrodes and sensors generate signals in response to the physiologic signs of the patient. The plethysmographic sensors are placed on three bands (4-6 of Sackner), in order to measure an accurate respiratory activity and also to measure different lung fluctuations at different regions of the

lung (Fig. 1 of Sackner). The signals are transmitted to a recording/alarm device where they are monitored for adverse conditions and logged (Abstract of Sackner).

Therefore it would have been obvious to one having ordinary skill in the art at the time the applicant's invention was made to have used a different program and a circuitry and used more than one sensor covering different lung regions similar to the method taught by physiological signs feedback system of Sackner in the device for detecting body movement of Frost to save the respiratory data and monitor the subject's respiratory activities for different lung regions in order to keep an accurate and separate log of all the respiration activities of a subject.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frost in view Sackner as applied to claim 10 above and further in view of of US 4,559,953 to Wright et al (Hereinafter "Wright").

In reference to claim 14:

Frost as modified by Sackner teaches, all of the claim limitations, see the rejections above.

However, Frost and Sackner fail to teach that:

The inner wall is substantially resilient and the outer wall is substantially rigid in relation to said inner wall; whereby the inner

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wall may follow, in use, the movement caused by the user's lung operation whilst the outer wall remains substantially rigid.

Wright teaches that:

An apparatus for detecting and measuring changes in the shape of a wall of a body includes a detector capsule adapted for attachment to the wall and pneumatically connected to a volume transducer responsive to changes in the internal volume of the apparatus produced by changes in the shape of the wall (Abstract of Wright).

The capsule (1 of Wright) comprises a cup shaped rigid body (2 of Wright), which may be made of metal or any suitable rigid plastic material which is closed by a resiliently deformable material (diaphragm 3 of Wright), the diaphragm may be any plastic material such as polyurethane (Col. 1, lines 59-68 and Col. 2, lines 28-44 of Wright).

Therefore it would have been obvious to one having ordinary skill in the art at the time the applicant's invention was made to have replaced the pocket and pressure sensor for body movement detecting system of Frost as modified by Sackner with a capsule and a transducer similar to the one taught by Wright in the apparatus for detecting changes in the shape of the body in order to study body functions such respiration in neonates or adults, as it has been explicitly taught by Wright (Col. 1, lines 10-13).

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8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frost in view of Sackner as applied to claim 11 above, and further in view of US 5,022,402 to Schieberl et al (Hereinafter "Schieberl").

In reference to claim 12:

Frost as modified by Sackner; teach all of the claim limitations; see the rejections above.

However, Frost and Sackner fail to teach that:

The chamber is sealed and the volume of the gas remains constant in the chamber as the body displaces during respiration.

Schieberl teaches that:

A medical monitoring device monitors the pulse and respiration rate of an infant, and transmits an alarm signal to a remote receiver when pulse and/or respiration rate irregularities are detected. The device incorporates a pressure sensor adjacent a small gas or liquid-filled bag or bladder member. The bladder member and attached sensors are contained in a compact monitor housing which is positioned against the monitored infant's body, so that the bladder member directly contacts the body, and is preferably held in place by a small belt wrapped around the infant (Abstract of Schieberl). The expansion of the infant's lungs and body during each inhalation acts to compress the bladder member against the monitor housing and belt, thereby creating an increase in the

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pressure of the contents by the pressure (Col. 1, lines 65-69 and Col. 2, lines 1-3 of Schieberl).

Therefore it would have been obvious to one having ordinary skill in the art at the time the applicant's invention was made to have replaced the pocket and pressure sensor in the device for detecting body movement of Frost as

modified by Sackner with a bladder and pressure sensor similar to the one of the bladder device for monitoring respiratory rate taught by Schieberl, in order to monitor respiratory rate of a subject.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2004/0143194 to Kihara et al discloses a respiratory measuring system, US 4,308,872 and US 4,807,640 to Watson et al discloses a method and apparatus for monitoring respiratory activity, US 4,884,578 to Morgenstern discloses an apparatus for monitoring respiration and cardiac activity, US 5,348,008 to Bornn et al discloses a cardiorespiratory alert system.

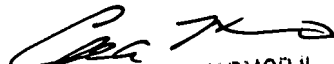
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita Saidi whose telephone number is 571-270-3001. The examiner can normally be reached on Monday-Thursday 8:30 am - 7:00 pm Est..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on 571-272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AS
9/27/07


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